

11 JAN 2005

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

REC'D 27 APR 2004



Applicant's or agent's file reference 4635N /AEC	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/03095	International filing date (day/month/year) 17.07.2003	Priority date (day/month/year) 19.07.2002
International Patent Classification (IPC) or both national classification and IPC B32B17/10, B32B17/10		
Applicant PILKINGTON PLC et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 08.12.2003	Date of completion of this report 23.04.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Lindner, T Telephone No. +49 89 2399-8976 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/03095

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-8 as originally filed

Claims, Numbers

1-19 as originally filed

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
 - ☐ the language of publication of the international application (under Rule 48.3(b)).
 - ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority in written form.
 - ☐ furnished subsequently to this Authority in computer readable form.
 - ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
 - ☐ the claims, Nos.:
 - ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/03095**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-19
	No: Claims	
Inventive step (IS)	Yes: Claims	1-19
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:
D1: DE 297 16 214U1
D2: US-A-5,193,895
D3: GB-A-1 401 497
2. The international application concerns a laminated glazing which comprises an intermediate functional layer consisting of plastic ply which is equipped with light emitting diodes and represents a circuit board in that wiring is present to electrically connect the LEDs to a power source.
- 3.1 Product claim 1 and process claims 15 and 16 are novel over the citations. LEDs in the interlayer of a laminated glazing do not emanate from either D1 or D2 or any other document of the international search report.
- 3.2 D1 and D2 document state of the art of a laminated glazing having incorporated therein an electrochromic film (D1) and use of flexible printed circuit boards as warning lights in an automobile.
A commonly used support for printed wiring boards is polyimide and recently the use of polyester has spread for the same purpose because of its flexibility.

In the art of visualisation, organic electrochromic displays and organic light emitting diodes are known.

As can be seen from D1, electrochromic devices can be incorporated into a glazing and apparently survive the laminating process thereof.

On the other hand, this teaching does not lend itself to the conclusion that the same would be true for other light emitting systems such as LEDs on a flexible carrier.

In this respect, D1 is silent about an alternative system or a hint as to the use of LEDs.

D2 does utilize a flexible strip of LEDs but this strip is intended to be stucked to an outer part of the body of a vehicle and there is suggestion that such a strip could be incorporated into a laminated glazing panel.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/03095

Again, no prediction is possible as to the sensitivity of this optical component to the laminating conditions of a glazing, i.e. as to whether an LED array which is mounted on a flexible printed support would survive the autoclaving conditions applied for the manufacture of safety glass.

- 3.3 The feature that an interlayer is provided with a cutout in order to house an LED equipped circuit board is taught by D3 in order to provide space for a temperature sensor.

Providing a cutout in the interlayer is a common measure in the art.